# eMetric

# Information Technology Coordinator
## Training Session

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- Introductions

- Timelines

- High Level Overview of iTester 3

- Overview of System Architecture & Requirements

- Installation Process

- Workstation Readiness Process

- Q&A

# Timeline

## Technology Coordinator Timeline:

| DATE | EVENT |
|---|---|
| June 21 | Training for technology coordinators. |
| June 29 | iTester Admin and iTester Client are released.<br>•iTester 3 installation can begin. |
| August 31 | Last day that iTester 2 is available for use by students. |
| September 4 through 14 | Pre-test testing window for South Dakota Benchmarks. |

- **June 29 – start of iTester install and testing:**
  - •Installation of iTester Client and performance of Site Setup and Workstation Readiness tasks.
  - •*Note: Teachers and students will not be able to complete a test until the Client has been installed at their facility!*

Two main components of the online testing engine:

- Test Administration System (iTester$^{TM}$ Admin).

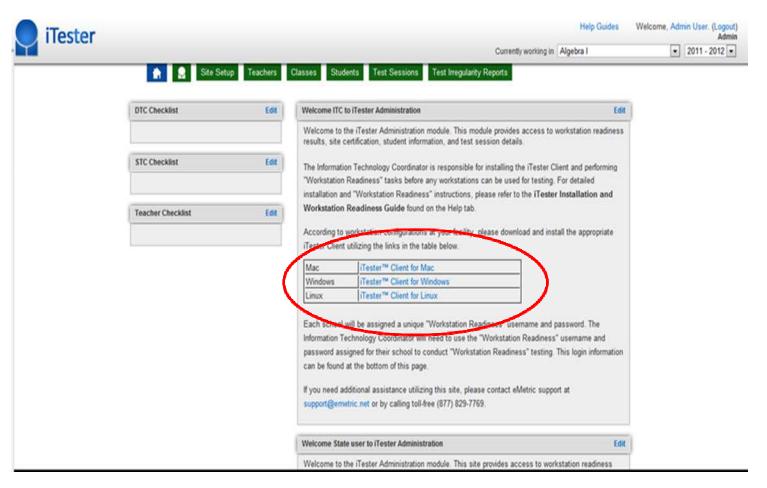- Student Test Delivery System (iTester$^{TM}$ Client).

## Why a new version?

- Allows for some updates to functionality without always having to reinstall the client.

- Java is no longer required.

- Support for mobile devices.

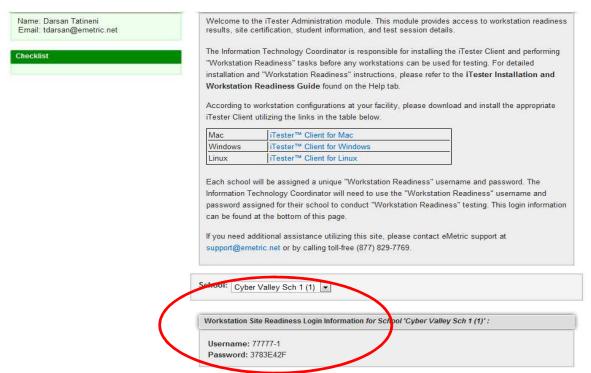- Support for Technology Enhanced Items.

# iTester Overview

## iTester Admin

- Accessible within the South Dakota Assessment Portal (sdap.emetric.net).

- Browser interface for state, district, and school personnel to manage students, student groups, etc.

- For IT Coordinators:
  - From here you can download the iTester Client install.
  - Perform workstation readiness tests (WSRs).

# iTester Overview

- The iTester Client can be downloaded from the iTester homepage.

- To perform your WSR, you'll need special login information.

- Additional information for WSRs can be found in the help guide section.

## Portal and Web applications

| | Browsers |
|---|---|
| Windows | Firefox 3.6+<br>Internet Explorer 7.0+<br>Google Chrome 10.0+ |
| Mac | Safari 4.0 +<br>Firefox 3.6+<br>Google Chrome 10.0+ |
| Linux | Firefox 3.6+<br>Google Chrome 10.0+ |
| iOS | Mobile Safari iOS 5.0+ |
| Android | Android Browser 4.0+ |

# System Requirements

## Student Workstation Component (Desktop Kiosk Mode)

| | Windows | Mac | Linux |
|---|---|---|---|
| Operating system | Windows XP SP2+ Windows Vista Windows 7 | Mac OS X 10.5.6 or later | Ubuntu 10.04+ Debian 6+ OpenSuSE 11.3+ Fedora Linux 14 |
| Processor | Intel Pentium 4 or later | Intel | Intel Pentium 3 or later |
| Free disk space | 200 MB | | |
| RAM | 512 MB | | |
| Screen Resolution | 1024 X 768 | | |

# System Requirements

## Student Workstation Component (Browser Mode)

|  | Chrome | Firefox | Internet Explorer |
|---|---|---|---|
| Any Operating system | Chrome 12 or later | Firefox 10 or later Coming soon | IE 9 or later Coming soon |

# System Requirements

## Student Workstation Component (Tablets)

- iPad with iOS 5.0 or later
  - With internet connection

- Plans for Windows 8 and Android in the near future

**Note:** Chromebooks running Google Chrome OS will also be supported for Browser mode only. Chrome OS automatically updates to the latest version.

## iTester Client

- Web-based application downloaded to each testing workstation or the network.

    - Desktop application that operates independently of an internet browser.

    - Needs internet to communicate with the eMetric iTester server using web technologies. The communication is via HTTP and HTTPS.

    - Internet connectivity is only required to download the test content and submit responses for scoring. If there is no internet available when the student's answers are submitted, the Client will store those answers (encrypted) until it is re-launched when internet connectivity is restored.

# iTester Failsafe Mechanism

## Heartbeat (Stored Response Files)

- Triggered to periodically save and protect student responses.
- Internet interruption during testing:
  - An encrypted response file is saved in the location indicated during installation.
  - The encrypted response file will be updated periodically and automatically sent to the server once internet is available.
- Internet interruption at the end of testing:
  - A file with a name similar to "iTesterSync_ AD849G-DA56-19F3-73K39823DJS3" will be created and saved in the location indicated during installation.  This file will contain the student's encrypted response. The student will be able to complete testing, but a screen will appear indicating they should notify their proctor.

## Event monitoring (Log Files)

- Captures all events/actions that occur during testing.
  - Stored in the location indicated during installation.

## iTester Client Security

- Test Security
  - Content:
    - Encrypted test content using AES
    - Remains encrypted during transmission from the web server to the Client on the testing workstation
    - Downloaded and decrypted upon student login
    - Decrypted content is stored in memory and will expire immediately after a student exits the client
  - Student Data Security:
    - Uses industry standard 128-bit SSL encryption
  - Desktop security
    - Kiosk mode restricts students from accessing the computer desktop or any other applications during testing

## Testing Environment:

- Firewalls

  - Allow two-way traffic through ports 80 and 443

- Proxy and content filter servers

  - White list https://sdap.emetric.net AND http://sdap.emetric.net on ports 80 and 443

- Sandboxing applications (i.e. DeepFreeze)

  - While installing the Client, choose network folder location for storing log files and encrypted response files.

  - Make sure the configured storage folder and its contents are **not** deleted by these applications.

- Thin Clients

  - Ensure there is enough memory, CPU and bandwidth on the server to accommodate multiple student test sessions

  - Client requires a minimum of 40 MB per client session

If there is a **Known** network outage

- Check for stored response files as soon as possible.
  - If stored response files **DO** exist, once network connectivity is restored, you will need to login to the workstation with the same student credentials and launch the iTester Client. Student responses will then be sent to the server.
- In the case of prolonged outages, if stored response files exist, extract these from the user profile location and save them in a secure location which will NOT be deleted by sandboxing applications.
- No student should log back into the iTester Client until stored response files have been handled.

Network Permissions

- If a network location is selected for saving stored response files and log files, users will need to have appropriate read/write permissions to the specified network folder.

## iTester Client Installation

- Individual workstation (Recommended)
  - Pros
    - No impact on LAN traffic during initial application launch.
    - Delivers a seamless experience
  - Cons
    - Time spent on application installation and configuration (potentially).
- Network install
  - Pros
    - Time spent on application installation and configuration.
    - Centralized location for application updates and configuration.
  - Cons
    - Downloading of the application from network folder to test taker's workstation could introduce single point of failure during application launch.
    - Initial application launch could be delayed depending on the LAN traffic and bandwidth.
    - Potential issues related to latency and intermittent network connectivity issues.

# Q & A

## QUESTIONS?

- support@emetric.net
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